Figure 15. Sprouting due to poor curing or storage conditions. Note that sprouts generally originate from the proximal end of the root (i.e., the end closest to the plant). (PHOTO BY G. HOLMES)

the facility, or the temperature will rise above acceptable levels in a short time. A storage facility must have provisions for cooling with outside air or a refrigeration system.

Although not apparent externally, significant dry matter loss may result in pithiness with the formation of many small voids (Figure 10). Pithiness is very common in sweetpotatoes held for long periods in poorly controlled storage facilities.

Sprouting in storage. Another effect of elevated storage temperatures is sprouting (Figure 15). At temperatures above 60°F (16°C), sweetpotatoes will sprout. The length of time required for sprouting depends on the temperature. It may take a month or more for sprouts to show at 65°F (18°C), but at 75°F (24°C) and warmer, sprouts can develop in a few weeks. Sprouting is always accompanied by rapid respiration and weight loss. Chemical sprout inhibitors are not used in sweetpotatoes because proper temperature control inhibits sprouting. USDA standards (see Appendix 2) list sprouts over three-fourths of an inch long as defects. Sprouts can be manually removed from roots during the packing process.

Chilling injury. Chilling injury is rare in modern storage facilities, but it can occur if roots are kept in common areas during the winter months. Storage below 50°F (10°C) can result in chilling injury that may not be evident until several weeks have passed (Figures 9 through 11).

Excessive shrinkage. If the humidity is low, sweetpotatoes will lose weight as moisture evaporates from the surface of roots. This results in weight loss and may cause shriveling of the skin, especially at root ends (Figure 16). Although some moisture loss is practically unavoidable during curing and storage, excessive water loss may be avoided by maintaining high relative humidity during storage.

Figure 16. Weight loss is increased by skinned areas and leads to shriveling. (PHOTO BY B. EDMUNDS)